

WHAT IS CLAIMED IS:

1 A process for producing a composite molded article  
comprising,

- 5 (i) at least one base body having a contoured surface,  
(ii) at least one first thermoplastic part, and  
(iii) at least one second thermoplastic part, each of said first and  
second thermoplastic parts being joined to said base body,

said process comprising:

- 10 (a) providing a multicomponent injection molding tool having at  
least two separate melt flow-way systems and at least two  
cavities in which each of the first and second thermoplastic  
parts are separately formed, each of said cavities being in  
separate communication with each of said separate melt  
15 flow-way systems;  
(b) placing said base body into said molding tool, said cavities  
being separated from each other by the contoured surface of  
said base body and sealing edges of said molding tool that  
abut the contoured surface of said base body;  
20 (c) injecting simultaneously a thermoplastic material into each of  
said cavities by means of said separate melt flow-way  
systems; and  
(d) removing said composite molded article from said molding  
tool,

25 wherein said first thermoplastic part (ii) and second thermoplastic part (iii)  
each become joined to said base body (i) during said injection molding  
step (c).

2. The process of Claim 1 wherein said base body (i) is  
30 fabricated from a material selected from one of metal and thermoplastic  
material.

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3. The process of Claim 2 wherein the metal from which said base body (i) is fabricated is selected from the group consisting of steel, aluminum, magnesium and alloys of these metals with other metals; the thermoplastic material from which said base body (i) is fabricated is selected from at least one of polyamide, polyester, polyolefin, styrene copolymer, polycarbonate, polypropylene, polyphenylene sulfide, polyimide, PSO and PEEK.
4. The process of Claim 1 wherein said base body is fabricated from metal, and said composite molded article is a plastic-metal composite molded article.
5. The process of Claim 1 wherein the thermoplastic material of each of said first and second thermoplastic parts (ii) and (iii) is independently selected from at least one of polyamide, polyester, polyolefin, styrene copolymer, polycarbonate, polypropylene, polyphenylene sulfide, polyimide, PSO and PEEK.
6. The process of Claim 1 wherein the thermoplastic material of said first thermoplastic part (ii) is different than the thermoplastic material of said second thermoplastic part (iii).
7. The process of Claim 1 wherein the thermoplastic material of each of said first and second thermoplastic parts (ii) and (iii) are each independently reinforced with a reinforcing amount of at least one reinforcing material.
8. The process of Claim 7 wherein said reinforcing material is selected from glass fibers, metal fibers, carbon fibers, glass beads and combinations thereof.

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9. The process of Claim 1 wherein said base body (i) has edges, at least a portion of the edges of said base body (i) become embedded in the thermoplastic material of at least one of said first thermoplastic part (ii) and said second thermoplastic part (iii) during injection molding step (c), thereby forming an interlocking connection between said base body (i) and at least one of said first and second thermoplastic parts.

10. The process of Claim 1 wherein a plurality of separate base bodies (i) are placed in said molding tool in step (b), said plurality of separate base bodies (i) being joined one to the other by means of said thermoplastic material injected into the cavities of said molding tool in step (c).

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